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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,628	02/04/2002	Byoung Yi Youn	GRANP1.001 C1	4249

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EXAMINER

FULLER, RODNEY EVAN

ART UNIT PAPER NUMBER

2851

DATE MAILED: 01/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,628

Applicant(s)

YOUN, BYOUNG YI

Examiner

Rodney E Fuller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 19-24 and 28-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 19-24 and 28-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 29 October 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Remarks

In response to applicant's Amendment, dated October 29, 2002, the examiner acknowledges the addition of claims 28-38 and cancellation of claims 16-18 and 25-27. Claims 1-15, 19-24 and 28-38 are pending.

The examiner acknowledges the corrections of the objections related to the Drawings and Specification set forth in the Office Action mailed July 25, 2002.

The amendments to the claims have address all the Claim Objections set forth in the Office Action mailed July 25, 2002.

Regarding the 35 U.S.C. 102(b) rejection of claims 1, 2, 3, 9, 10, 13, 14, 19, 20 and 24 as being anticipated by Allard, et al. (US 4,743,964), the applicant makes the argument that "...in the Allard patent, each of the images is inverted by the reflection mirrors (14, 24) after images are output from the display devices (12, 22)," and "this means that the display devices (12, 22) output (display) original images, i.e., non-inverting images." The examiner acknowledges that Allard utilizes two sets of mirrors in contrast to the preset invention which utilizes only a single set of mirrors. However, the examiner maintains that the monitors (12, 22) and the first set of mirrors (14, 24) can be considered in combination as the "display device" equivalent to that of the claimed invention. Thus, the examiner has considered the applicant's arguments in light of the amended claims and maintains the rejection.

Futhermore, in the event that the "display device" in Allard is not considered to be the equivalent to the display device of the claimed invention, the apparatus set forth in Carollo (reference cited in prior office action) clearly utilizes the same display device as of the claimed

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invention. The examiner acknowledges the applicant's argument that Carollo "...says nothing about an image inverting in the image generators." However, Carollo and the present invention both utilize a single set of mirrors with separate image generators in the same configuration. Since the mirrors inherently invert the images, the image generators would likewise inherently invert the images in order that the resulting image viewed is properly oriented.

Regarding the 35 U.S.C. 103(a) rejection of claims 5-8, 11, 12, 15-18, 21, 22, 25-27 as being unpatentable over Allard (US 4,743,964) in view of Ricks (US 4,190,856), the applicant makes the argument that Allard nor Ricks disclose a "...first left and right plane display device for simultaneously outputting the inverted left and right images," "...which is similar to the limitation to that discussed with regard to claim 1." As above, the examiner maintains that Allard does disclose the image generators that output inverted left and right images. Furthermore, the applicant makes the argument that "...no suggestion or motivation to combine the teachings to create the claimed invention of Claim 5 exists in either reference." The examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures." *In re Bozek*, 163 USPQ 545 (CCPA). In this case, the examiner maintains that the ordinary artisan would have been motivated to modify Allard (US 4,743,964) in order to provide

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composite or color images to the viewer. Thus, the examiner has considered the applicant's arguments in light of the amended claims and maintains the rejection.

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Korea on June 2, 2000. It is noted, however, that applicant has not filed a certified copy of the 10-2000-30643 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 3, 9, 10, 13, 14, 19, 20, 24, 28, and 30-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Allard, et al. (US 4,743,964).

Allard (US 4,743,964) discloses all the structure set forth in the claims.

Regarding claims 1, 2, 9, 19, 20, Allard (US 4,743,964) discloses "left and right image inverting devices (Fig. 1, ref.# 14, 24) for receiving left and right plane images of an object and inverting the left and right sides of the left and right images, respectively, each plane image be produced at different positions with respect to the object; left and right plane image display devices (Fig. 1, ref.# 12, 22) simultaneously outputting the inverted left and right plane images; a left reflection mirror (Fig. 1, ref.# 15), on which the

inverted left image is incident and reflected at the same angle, so that the reflected left image is perceived by a left eye of a viewer; and a right reflection mirror (Fig. 1, ref.# 25), on which the inverted right image plane is incident and reflected at the same angle, so that the reflected right image is perceived by a right eye of a viewer.”

Regarding claims 3 and 13, Allard (US 4,743,964) discloses “...wherein each of the left and right plane image display devices comprise a television monitor, a big-screen wall mount TV, a computer monitor, or a LCD).” (See Figure 1, ref.# 12, 22 and column 2, line 58)

Regarding claims 10 and 20, Allard (US 4,743,964) discloses “...wherein the first and second mirrors are arranged such that the two mirrors as a whole are substantially ‘V’ shaped.”

Regarding claims 14 and 24, Allard (US 4,743,964) discloses “...wherein the first and second positions are substantially symmetric with respect to a line that passes the first object in a latitudinal direction.” (See Fig. 1, note all components are symmetrical along a line passing through the center of the viewer)

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allard, et al. (US 4,743,964).

As best the examiner is able to ascertain the claimed invention, Allard (US 4,743,964) discloses all the structure set forth in the claims except "...wherein, in the left and right reflection mirrors, incident angles of the left and right plane images and reflection angles of the images reflected to the viewer are adjusted in a range of about 30-50 degrees." It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the incident angles of the left and right plane images and reflection angles of the images reflected to the viewer to be about 30-50 degrees, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

6. Claims 5-8, 11, 12, 15, 21, 22, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allard (US 4,743,964) in view of Ricks (US 4,190,856).

As best the examiner is able to ascertain the claimed invention, Allard (US 4,743,964) discloses all the structure set forth in the claims except that Allard (US

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4,743,964) discloses a single set of display devices, while the present invention in claims 5-8, 11, 12, 15, 21, 22, sets forth where the images are produced by multiple display devices and combined with 50/50 mirrors (beamsplitters). However, the use of multiple display devices with 50/50 mirrors are routine in the art as is evident from the teaching of Ricks (US 4,190,856). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Allard (US 4,743,964) by including multiple display devices with associated beamsplitters in place of the individual display devices of Allard (US 4,743,964). The ordinary artisan would have been motivated to modify Allard (US 4,743,964) in order to provide composite or color images to the viewer.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Fuller whose telephone number is (703) 306-5641. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams, can be reached on (703) 308-2847.

Rodney Fuller
Primary Examiner

A handwritten signature in black ink, appearing to read 'R. Fuller', is written over the printed name of the examiner.

January 12, 2003